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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. |
|-----------------|-------------|----------------------|---------------------|
|-----------------|-------------|----------------------|---------------------|

08/531,869 09/21/95 USUI

M 920276D/LH

BRITER J EXAMINER

24M1/0412  
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ART UNIT

PAPER NUMBER

2415

DATE MAILED:

04/12/96

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

|                              |                  |                |
|------------------------------|------------------|----------------|
| <b>Office Action Summary</b> | Application No.  | Applicant(s)   |
|                              | 08/531,869       | Usui et al     |
|                              | Examiner         | Group Art Unit |
|                              | Jeffery A. Brier | 2609           |



Responsive to communication(s) filed on Sep 21, 1995

This action is FINAL.

Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

#### Disposition of Claims

Claim(s) 30 is/are pending in the application.

Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

Claim(s) \_\_\_\_\_ is/are allowed.

Claim(s) 30 is/are rejected.

Claim(s) \_\_\_\_\_ is/are objected to.

Claims \_\_\_\_\_ are subject to restriction or election requirement.

#### Application Papers

See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.

The proposed drawing correction, filed on Sep 21, 1995 is  approved  disapproved.

The specification is objected to by the Examiner.

The oath or declaration is objected to by the Examiner.

#### Priority under 35 U.S.C. § 119

Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

All  Some\*  None of the CERTIFIED copies of the priority documents have been

received.

received in Application No. (Series Code/Serial Number) 07/866,744.

received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\*Certified copies not received: \_\_\_\_\_

Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

#### Attachment(s)

Notice of References Cited, PTO-892

Information Disclosure Statement(s), PTO-1449, Paper No(s). \_\_\_\_\_

Interview Summary, PTO-413

Notice of Draftsperson's Patent Drawing Review, PTO-948

Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

**Part III DETAILED ACTION**

***Priority***

1. Acknowledgment is made of applicant's claim for priority under 35 U.S.C. § 119. The certified copy has been filed in parent application, Serial No. 07/866,744, filed on 4/10/92.

***Drawings***

2. The proposed drawing correction filed on 9/21/95 have been approved.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --  
(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

4. Claim 30 is rejected under 35 U.S.C. § 102(e) as being anticipated by Bassetti, Jr. U.S. Patent No. 5,122,783. Bassetti is concerned with applying voltages to each pixel of a liquid crystal display to better control the grayscale of the image being displayed. In figure 8A image data is applied to input 801 which applies the same image data to elements 802, 820, and register 817 which is a one pixel delay register. The current

pixel data and the previous pixel data are compared by comparator 818 and the result is used by phase pattern selecting RAM 820 in selecting the best grayscale voltages to be applied to that pixel of the liquid crystal display. Column 10 lines 11-27 describe the comparison of the current and the previous display data to derive the best voltage to apply to the liquid crystal display.

5. Claim 30 is rejected under 35 U.S.C. § 102(e) as being anticipated by Bassetti, Jr. U.S. Patent No. 5,185,602. Figure 11 illustrates and column 20 line 55 to column 21 line 14 describe a one pixel delay register 496 and describes comparing this delayed pixel data with the current pixel data and applying the result of this comparison to a ROM to aid in selecting the best grayscale voltage value to the liquid crystal display.

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. § 103 which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Subject matter developed by another person, which qualifies as prior art only under subsection (f) or (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same

person or subject to an obligation of assignment to the same person.

7. Claim 30 is rejected under 35 U.S.C. § 103 as being unpatentable over Japanese Patent No. 2-113476 to Casio and Bassetti, Jr. U.S. Patent No. 5,185,602. The Casio system stores a frame of image data and compares on a pixel by pixel basis current image data with the stored image data. The result of this comparison determines the level of the voltage to be applied to each pixel for any grayscale value specified by the current image data. This reference describes a circuit for performing the comparison and describes a means for selecting the voltage which will be applied to the liquid crystal display in response to the result of the comparison. This reference fails to describe a grayscale memory which will convert the result of the comparison into a value which will determine the voltage to be applied to the liquid crystal display. Bassetti uses several grayscale memories for determining the voltage to be applied to the liquid crystal display. It would have been obvious to one of ordinary skill in the art at the time of applicants invention to use a look up table resident in a memory to be the "means for selecting" the voltage to be applied to the liquid crystal display because a look up table is a well known means to perform a calculation.

**Conclusion**

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Bassetti, Jr. U.S. Patent No. 5,293,159 is a child of Bassetti, Jr. U.S. Patent No. 5,185,602.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffery A. Brier whose telephone number is (703) 305-4723. The examiner can normally be reached on Monday through Friday from 7:15am to 3:45pm eastern time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Hjerpe, can be reached on (703) 305-4709. The fax phone number for this Art Unit is (703)-308-5399.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-4700.

April 8, 1996

*Jeffrey A. Brier*  
JEFFERY BRIER  
PRIMARY EXAMINER  
GROUP 2600